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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,489	11/12/2003	Sharon Duvdevani	U 014859-9	7213
140	7590	09/09/2004	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			KIBLER, VIRGINIA M	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/706,489	Applicant(s) DUVDEVANI ET AL.	
	Examiner Virginia M Kibler	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11122003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: 1050 (Page 80, para. 3 and 4). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: "provdng" should be changed to "providing" on page 7, para. 5, line 4; "a a" should be changed to "a" on page 12, para. 9, line 1; "Applicant's copending U.S. patent application _____" should be changed to include "09/565,500" and "Pat. No. 6,437,312" on page 17; "--Illumination for Inspecting Surfaces of Objects"-- should be changed to -- "Illumination for Inspecting Surfaces of Articles"-- on page 18, line 1; "specifc" should

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be changed to "specific" on page 20, para. 3, line 5; "programable" should be changed to "programmable" on page 25, line 16; "the the width" should be changed to "the width" on page 59, line 9; "can can not" should be changed to "can not" on page 66, line 9; and "poyline" should be changed to "polyline" on page 81, line 25.

Appropriate correction is required.

Abstract

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the

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international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 5, 7-9, 11, 13, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by DeYong et al. (6,577,757).

Regarding claims 1 and 9, DeYong et al. ("DeYong") discloses for each of a plurality of types of local characteristics, each type occurring at least once within electrical circuitry to be inspected (Col. 5, lines 37-41; Figure 4), identifying at least one portion of interest within the electrical circuitry whereat the local characteristics are expected to occur (Figure 4; Col. 9, lines 54-67, Col. 10, lines 1-4) and inspecting an image of each portion of interest (Col. 2, lines 63-67, Col. 3, lines 1-11) using a knowledge base containing a set of features and past decision confidences selected in response to each portion of interest (Col. 5, lines 48-62; Col. 6, lines 20-40; Col. 27, lines 37-52), thereby using an inspection task selected in response to the type of local characteristic expected to occur.

Regarding claims 3 and 11, DeYong discloses the identifying of at least one portion of interest comprises identification of at least one spatial region within the electrical circuitry (Figure 4).

Regarding claims 5 and 13, DeYong discloses the identification of at least one spatial region is at least partly based on a computer generated input (Col. 9, lines 2-5).

Regarding claims 7 and 15, DeYong discloses computer-assigning (Figure 1, 190) an inspection task to at least one individual portion of interest in response to the type of local characteristic expected to occur in the individual portion of interest (Col. 5, lines 48-62; Col. 6, lines 20-40; Col. 27, lines 37-52).

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Regarding claims 8 and 16, DeYong discloses outputting at least one indication of defects responsive to the inspecting step (Figure 2).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 4, 6, 10, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeYong et al. (6,577,757) as applied to claims 1, 3, 9, and 11 above.

Regarding claims 2 and 10, DeYong discloses the plurality of types of local characteristics includes component area (Col. 9, lines 54-67). While DeYong does not explicitly disclose chip area, it would have been obvious to one of ordinary skill in the art to modify component area to chip area depending on the object being inspected.

Regarding claims 4 and 12, DeYong does not appear to expressly recognize the identification of at least one spatial region is at least partly based on a user input. However, DeYong discloses allowing the operator to pre-program certain parameters (Col. 6, lines 48-63). Therefore, it would have been obvious to one of ordinary skill in the art to have modified the pre-programming of certain parameters to include identification of at least one spatial region. The motivation for doing so would have been because allowing user input is well known in the art and routinely utilized in machine vision systems and would enhance the detection accuracy of the system.

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Regarding claims 6 and 14, the arguments analogous to those presented above for claim 5 are applicable to claims 6 and 14.

Other Prior Art Cited

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,442,291 to Whitman for machine vision methods and articles of manufacture for ball grid array.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon-Thurs 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Virginia Kibler can be reached on (703) 308-4072. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Virginia Kibler

Virginia Kibler
08/24/04

**MEHRDAD DASTOURI
PRIMARY EXAMINER**

Mehrdad Dastouri